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ABSTRACT

The International Association for the Evaluation of Educational Achievement (IEA) conducted several surveys between 1964 and 1985. Sweden has taken part in nine of the surveys. This paper reports the survey results briefly. Major sections included are: (1) Swedish results for all IEA studies; (2) science tests in 1970 and 1983; (3) mathematics tests in 1964 and 1980; (4) reading comprehension in 1970; (5) geographical knowledge survey; (6) statisfaction with life and school; (7) contextual variables collected by IEA studies, including school time, resource inputs, homework, and video watching; and (8) economic analysis of the Swedish education system. Many tables and graphs are provided. A list of Swedish publications related to the nine studies is appended. (YP)

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SCHOOL RESEARCH NEWSLETTER

AUGUST 1989 FIELD-TOPIC 1989:6

Swedish schools in an international perspective

The International Association for the Evaluation of Educational Achievment (IEA) conducted several joint international surveys between 1964 and 1985. Sweden has taken part in nine of these surveys, and they provide a useful basis for inter-country comparisons of educational achievment. The Swedish results have on the whole been good.

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1985:9 Immigrant pupils at the senior level of compulsory school and in the upper secondary school
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1986:2 IEA Written composition study
1986:3 UTRES - Evaluation of resource utilisation in upper secondary school
1986:4 Technology and Science in school and society
1986:5 Historical image and historical awarness
1986:6 Political and citizenship education in Swedish schools in the 20th century
1986:7 Feasibility of joint studies in adult education
1986:8 Studies of the innovation process in compulsory school
1986:9 Girls in science and technology
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1987:2 Functional opportunities of the school administration in municipa - lities with local agencies and free municipality experiments
1987:3 Steering strategies in a decentralised decitionmaking system
1987:4 The outward efficiency of schools
1987:5 Swedish in upper secondary school - two worlds?
1988:1 META-studies
1988:2 Pupils frames of reference and the content of teaching
1988:3 Follow-up of the in-service training programme " An upper secondary school for all"
1988:4 A Cognitive Taxonomy for mathematics teaching
1988:5 Psychological Mechanisms in children with deficient empathy and sympathy
1989:1 Decentralisation in school administration
1989:2 Alternative Course in mathematics
1989:3 Effects of decentralisation in the school sector
1989:4 Childrens conceptions of division and of equal parts
1989:5 Evaluation of education for industry
1989:6 Swedish schools in an international perspective

SWEDISH SCHOOLS IN AN INTERNATIONAL PERSPECTIVE

In debates and newspaper articles it is alleged from time to time that Swedish schools have failed in their communication of knowledge. Swedish pupils today know less than they used to and basic skills have had to pay deference to new subjects and activities which frustrate the ability of schools to cope with basic instruction. Other articles maintain that the standard of knowledge among pupils in Swedish schools can very well bear comparison with other countries and that Sweden has such a highly trained workforce as to be internationally enviable.

Comparing the standard of knowledge among pupils in different countries or within a single country over time is no simple undertaking. Apart from the difficulty of construction measuring instruments which will take in the entire spectrum of knowledge and skills to which the curricular aspire, international measurements also entail the difficulty of doing justice to each country's individuality.

Within the IEA, the International Association for the Evaluation of Educational Achievement, however, several joint international surveys have been successfully completed, and these provide a good foundation - the best hitherto - for comparison of educational achievement. Other surveys involving international comparisons are the WHO comparative national studies of school children's health, OECD country reviews and statistical digests, and a study of geographical knowledge conducted by the National Geographical Society. In November 1988 the Economist published an article comparing Sweden's educational system with the systems in other countries.

IEA STUDIES IN WHICH SWEDEN HAS TAKEN PART

Sweden has taken part in nine out of a total of twelve IEA studies. Two more are currently being planned, and Sweden will be taking part in one of them, "Reading Literacy", dealing with reading habits and reading ability.

The studies in which Sweden has taken part are as follows:

Year	Subject Field	Ages Covered
1964	Mathematics	13-year-olds Upper secondary school, final grade
1970	Science subjects	10-year-olds 14-year-olds Upper secondary and continuation schools, final grades
1970	Reading comprehension and literature comprehension	10-year-olds 14-year-olds Upper secondary and continuation schools, final grades
1971	English as a foreign language	14-year-olds Upper secondary and continuation schools, final grades
1971	French as a foreign language	Upper secondary school, final grades
1971	Civics	Upper secondary and continuation schools, final grades
1980	Mathematics	13-year-olds Upper secondary school, grade 3
1983	Science subjects	10-year-olds 14-year-olds Upper secondary school, grade 3
1985	Writing (International results not yet reported)	Grade 6 Grade 9 Upper secondary school, grade 3 (3-year lines) and grade 2 (2-year lines)

A list of Swedish publications describing these studies is appended.

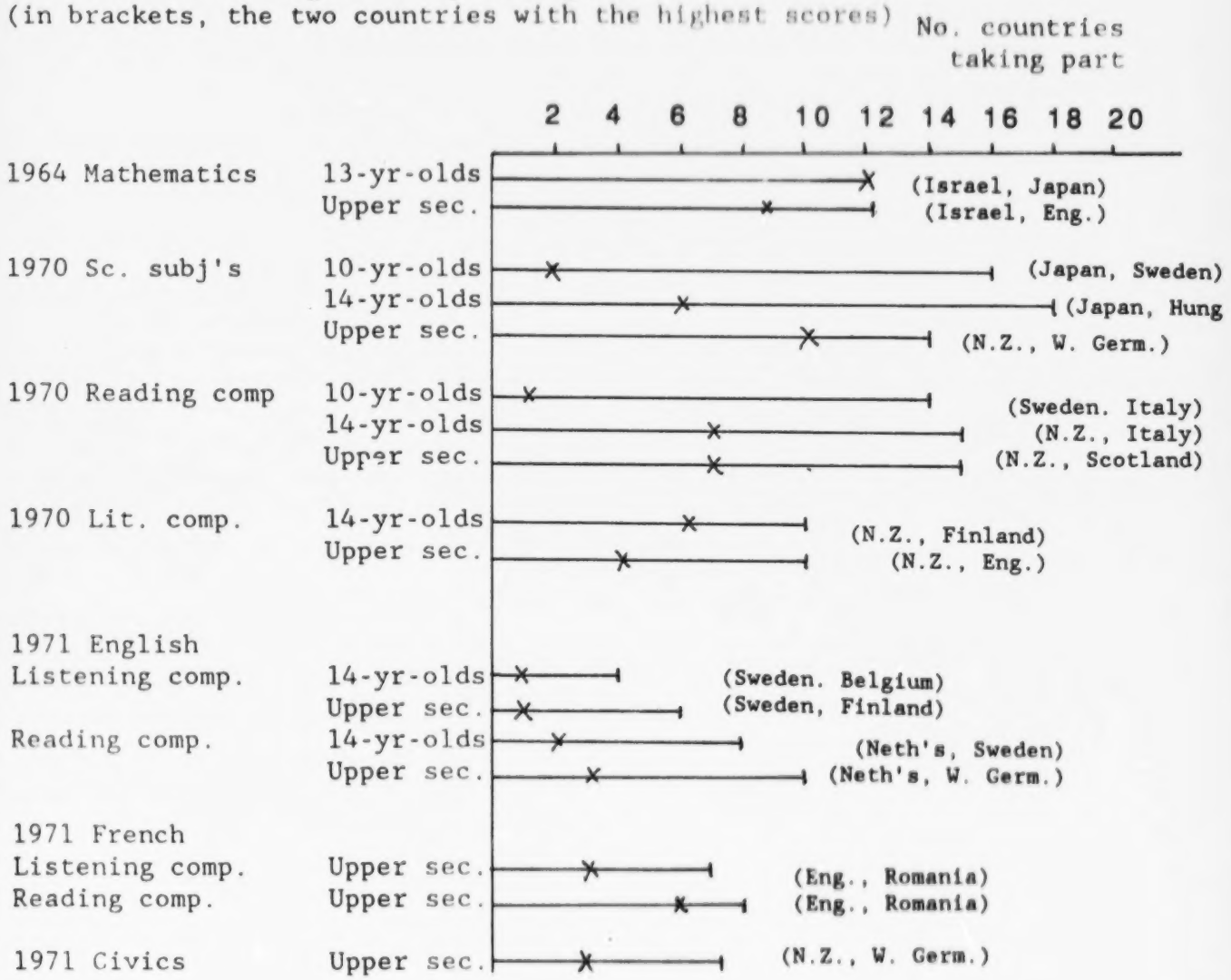
SWEDISH IEA FINDINGS IN BRIEF

The following illustration shows the Swedish results for all IEA studies in which Sweden has taken part. This figure conveys an extremely laconic, rough picture of Swedish pupils' achievement. In the following pages, the latest findings will be presented in somewhat greater detail.

The over view shows that Swedish results have been good on the whole. In Mathematics in grade 7, however, Swedish pupils have done less well that pupils in most other countries, both in the first study in 1964 and in the later study in 1980. In science subjects, on the other hand, Swedish pupils' results equal the best countries in both surveys. In reading, foreign languages and civics too, Swedish pupils did well by international standards.

Swedish IEA results in brief

x = Sweden's ranking order by average score
(in brackets, the two countries with the highest scores)



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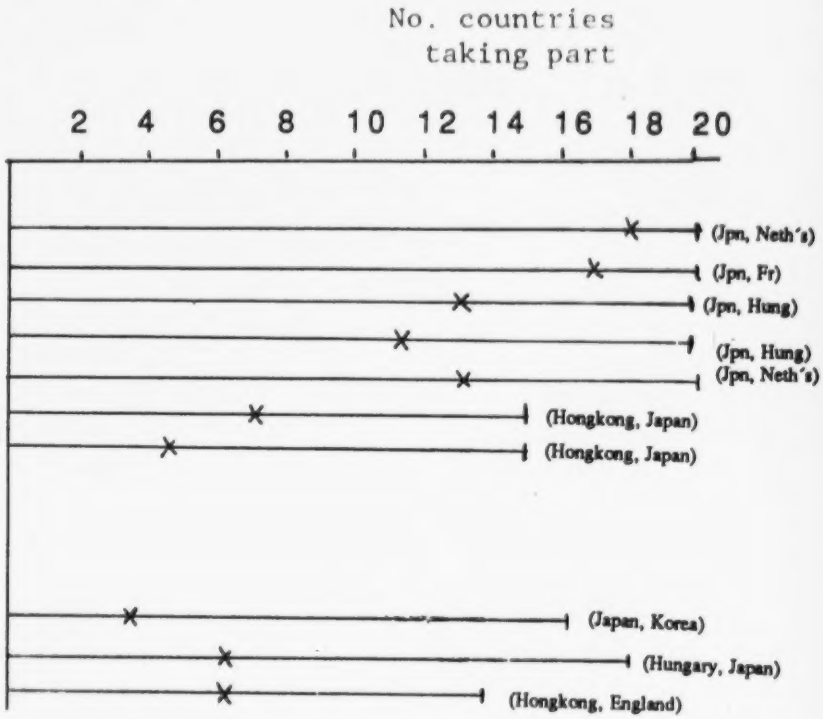


SCIENCE SUBJECTS

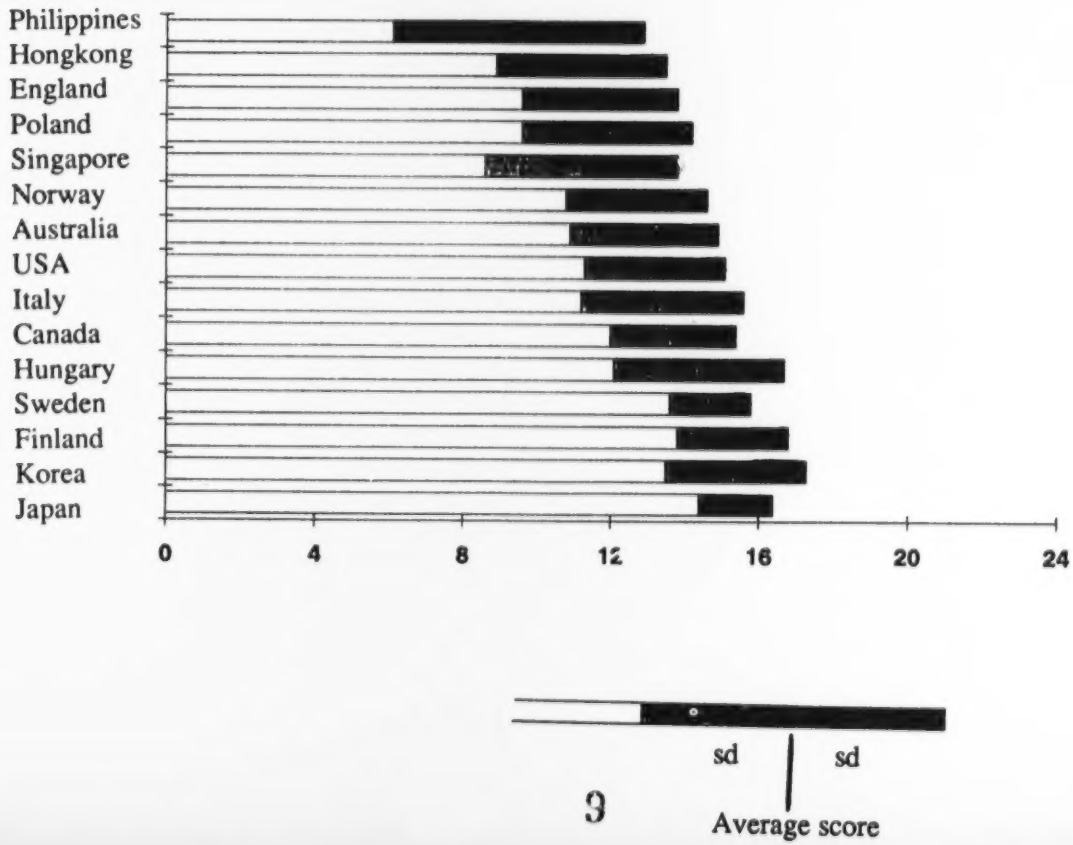
The 10-year-olds' results

The 1983 survey of science subjects involved three age groups, viz the 10-year-olds, (grade 4 of compulsory school in Sweden), 14-year-olds (grade 8 of compulsory school in Sweden) and the final grade of upper secondary school in lines which include science subjects (biology, physics, chemistry), which in Sweden means grade 3 of the Natural Sciences and Technology lines.

In the international achievement test for ten-year-olds, in which 15 countries took part, the Swedish average score was 14.7 out of 24. Three countries had slightly higher average scores, viz just over 15. Figure 1 shows average scores and standard deviations (referring to the variation of right answers given between pupils) for the 15 countries taking part. As can be seen, Sweden and Hungary have roughly the same average number of points. Detailed study of the figure reveals that the standard deviation, i.e. the measurement of variation in test scores between pupils in each country, is smaller in Sweden (and in Japan and Finland) than in the other countries.

Figure 1

Science subjects 1983, 10-year olds.
Average score and standard deviation.



Nationwide equivalence of educational standards is an important objective of Swedish school policy. Analyses of test results in grade 4 show that inter-school differences in average scores were very small in Sweden. Only in Japan were they smaller still. Figure 2 gives a conspectus of inter-school differences in the fifteen countries. The columns show the variation of pupils' results between schools as a percentage of the total variation of pupils' achievements in each country. Inter-school variance by percentages of pupil variance. Sweden has the smallest inter-school difference of all the countries taking part.Japan and Finland also have small inter-school differences whereas countries like the Philippines and Singapore, with segregated school systems, have very large differences.

Figure 2

Science subjects 1983, 10-year olds.

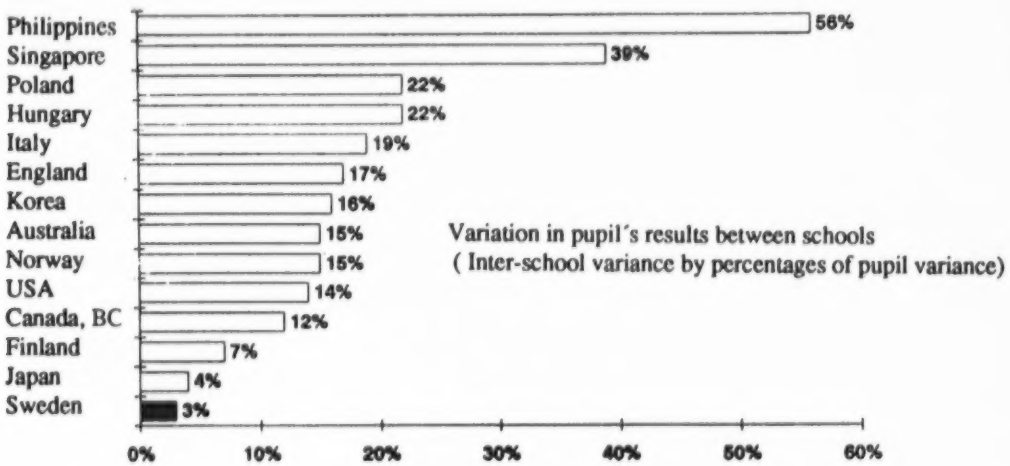
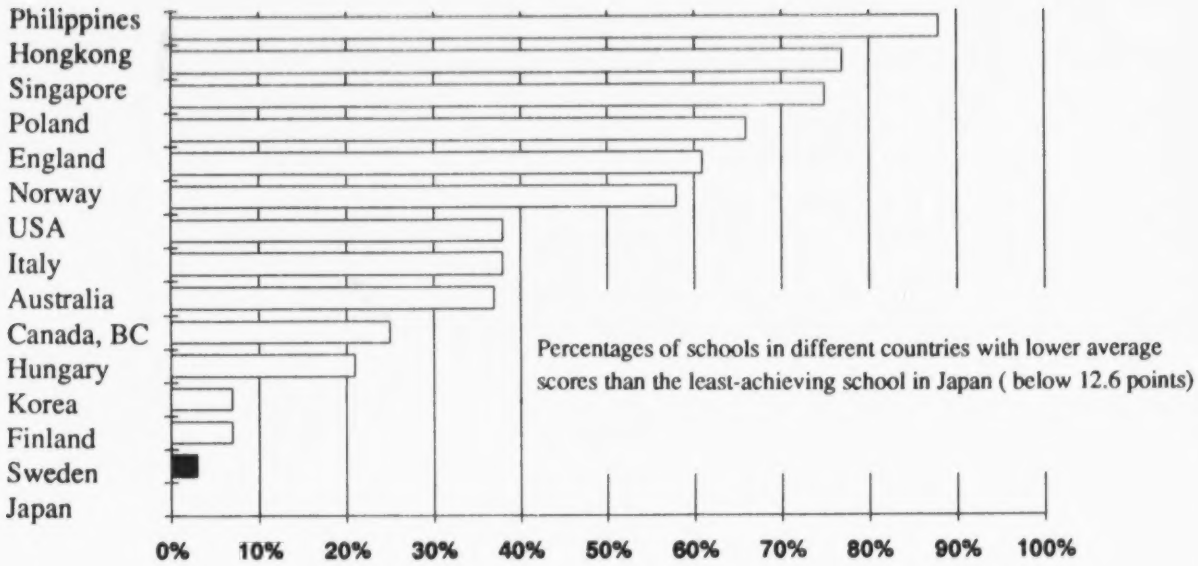


Figure 3 shows another way of comparing differences between schools. In this figure the columns indicate the percentage of schools in each country whose average scores are lower than the average of 12.6 for the lowest achieving school in Japan. As can be seen, the ranking order is much the same as in the previous figure. Apart from Singapore, Hong Kong and the Philippines, Poland, England and Norway also have large numbers of schools with low average scores. In Sweden, 3% of the schools had average scores below 12.6.

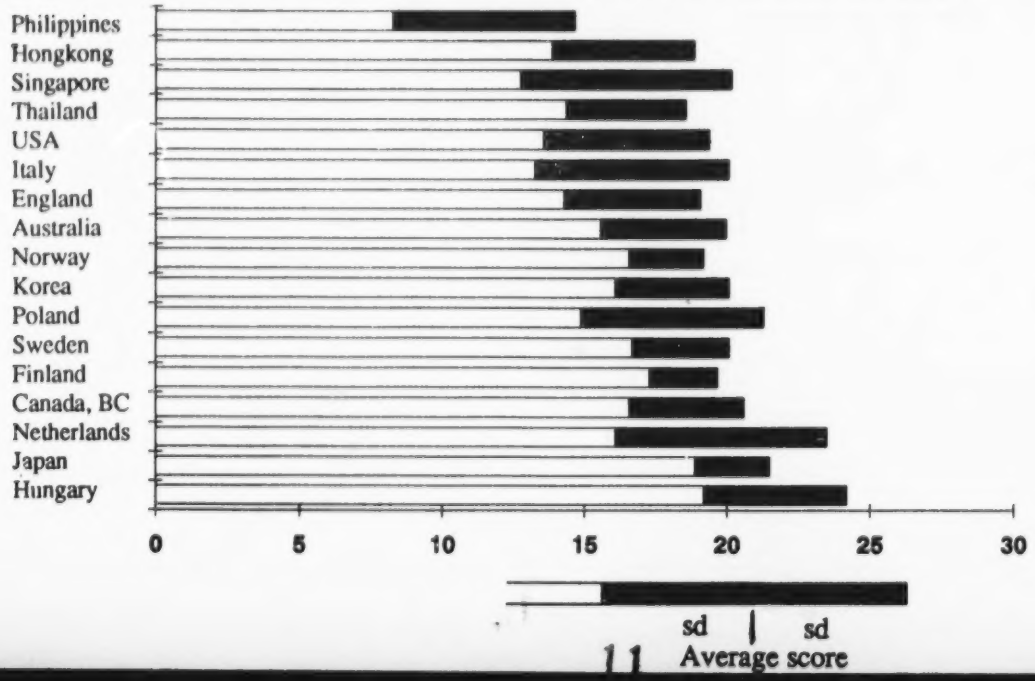
Figure 3
Science subjects 1983, 10-year olds



14-year-olds' results

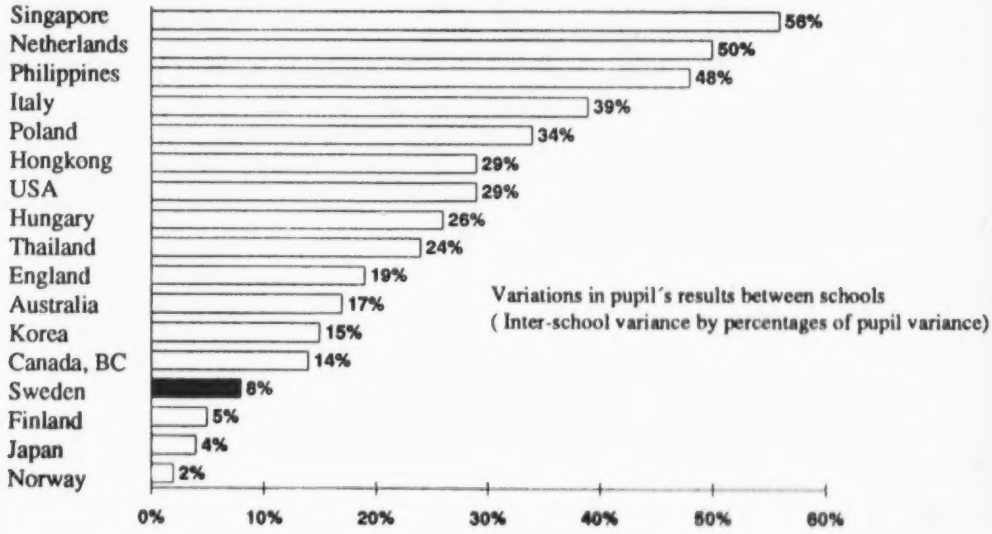
The Swedish 14-year-olds' test scores also put them in the upper part of the list for the 17 countries taking part. Sweden's average score for 30 questions was 18.4 points. Hungary, Japan and the Netherlands had appreciably better results. These countries were followed, in ranking order by Canada, Finland, Sweden, Poland, Korea, Norway and Australia, with very small differences between them. (Figure 4).

Figure 4
Science subjects 1983, 14-year olds
Average score and standard deviation



At the senior level of compulsory school, too, results varied very little between different schools in Sweden, (Figure 5). The inter-school variation was only 8% of the total variation of results among the 14-year-olds. (Variation measured by variance.) In the USA, for example, achievement levels varied a great deal from one school to another, the inter-school variation of results being no less than 29% of the total variation of pupils' achievements.

Figure 5



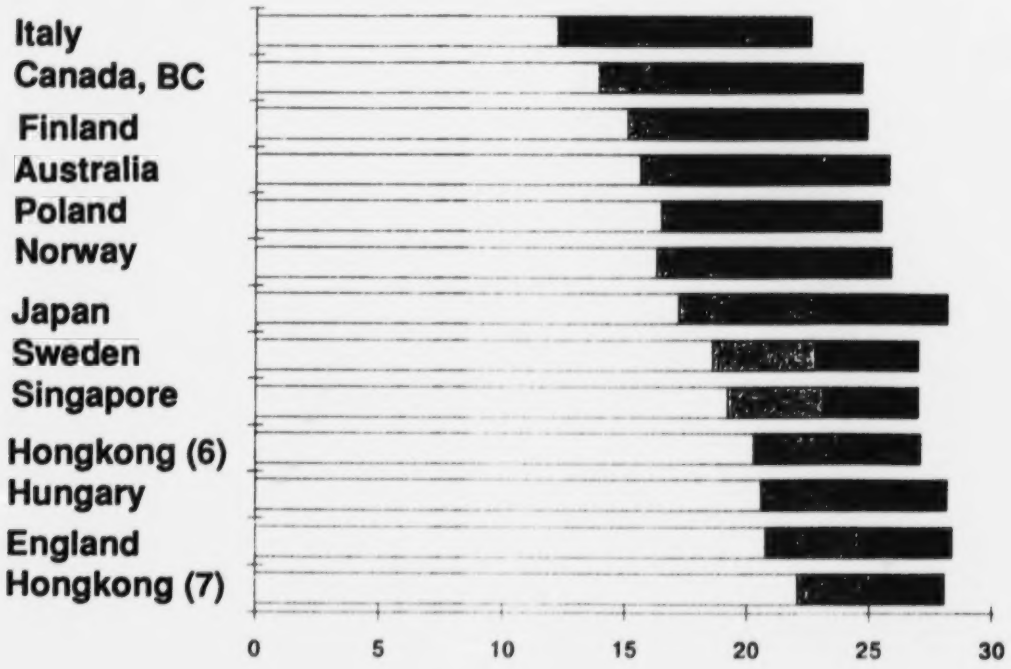
Results for upper secondary school students

The international comparisons of achievements at upper secondary level were made among students majoring in science, which in Sweden means the Natural Sciences and Technology.
The students in this sample were given a 30-question "course test" and special tests in biology, physics and chemistry. It is important here to bear in mind the differences existing between science study programmes in most other countries and Sweden. Swedish students also take many non-science subjects, whereas students taking the programmes included in the comparison are generally far more specialised. The proportion of students per year at upper secondary level varies from one country to another, and so does the proportion taking specialised science programmes. All in all, the differences between school systems are even greater at upper secondary than at compulsory school level, making international comparisons more difficult than ever. Figure 6 shows the results obtained by the participating countries in the "core" science test. The Swedish students scored an average of 22.8 on the 30 questions in the test. Hong Kong, England, Hungary and Singapore had higher average scores. Hong Kong, England and Singapore all had poor results among 10-and 14-year-olds. Their science education is highly specialised at upper secondary level. The results of the international comparisons of syllabi and of educational participation are not yet available, but we know that the Hong Kong and Singapore education systems are highly segregated; in England too, the proportion attending upper secondary school is smaller than in Sweden and only a small percentage

specialise in science subjects. The students in those countries taking science at upper secondary level constitute an élite. The resources invested in them and in scientific specialisation are reflected by good results at this level compared with compulsory school.

Figure 6

Science subjects 1983, final grade of upper secondary school,
science specialities (Natural Science and Technology lines in Sweden)
Average score and standard deviation



In the specialised biology, physics and chemistry tests, the Swedish students from the Natural Sciences and Technology lines, came lower on the international ranking list than they did in the "core" test. Here again the list is topped by Singapore, England, Hong Kong and Hungary. Norway has better results than Sweden for all three tests, (if students in the technology line, not all of whom have taken biology are also included in the comparison). Finland did better in biology but less well in physics and chemistry.

Comparisons between the 1970 and 1983 studies

Data processing to facilitate international comparisons of changes in test scores between 1970 and 1983 is now in progress and at present only certain results are available.

The Swedish pupils' test results in 1983 can be compared with their achievements in 1970. A number of questions were the same in both tests. In all grades and lines, comparisons show that pupils have improved their knowledge of general science between 1970 and 1983. As an example, figure 7 shows the percentage change in the average number of right answers at the senior level of compulsory school, while figure 8 shows the distribution of results for students in the Natural Sciences line in both years. Particularly large differences occur in grade 7. This study suggests that knowledge growth has mainly accelerated at intermediate level.

Figure 7
Science subjects 1970 and 1983, grades 7, 8 and 9.
Results for 18 common test questions by percentage of right answers in each year.

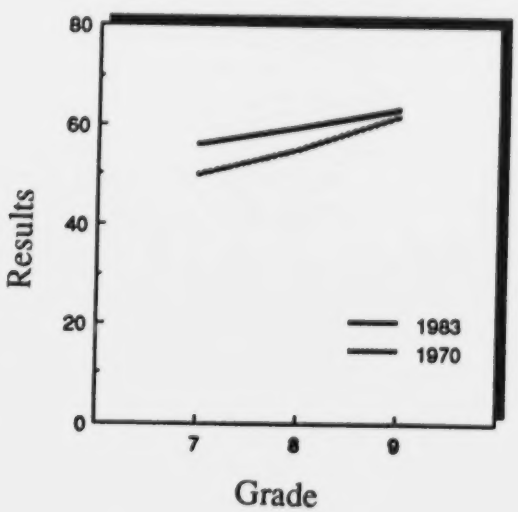
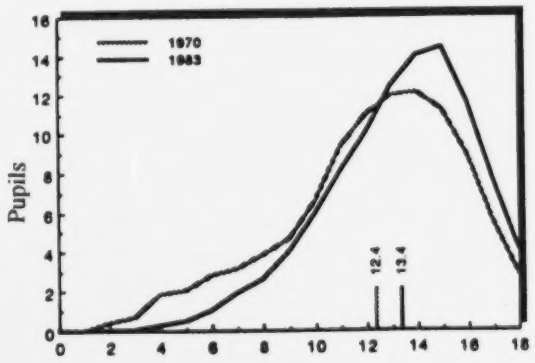


Figure 9 shows the change in results between 1970 and 1983 for various sub-groups of Natural Sciences line students. This figure shows the change in results for the best 10 and 25 per cent of students and for the 10 and 25 per cent lowest achievers in each year. As will be seen, the lowest achievers improved their performance a great deal in the second study, but not at the expense of the best achievers, who are performing as well as ever. Where the very best achievers are concerned, the test cannot measure any improvement, because they were already getting practically all the answers right in 1970.

Figure 8

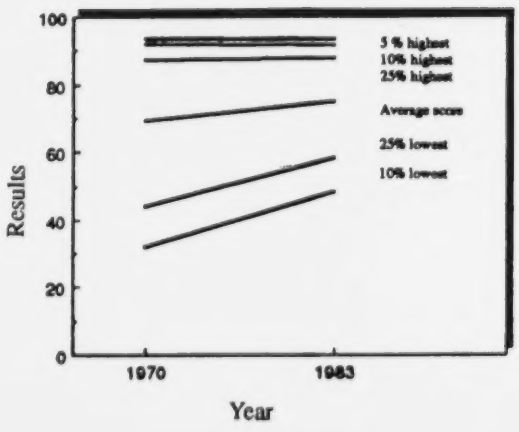
Science subjects 1970 and 1983, Natural Sciences line.
Breakdown of results on 18 common tasks.



Similar comparisons for the countries taking part in both studies will be available shortly. Comparisons can be made between the six and seven countries, respectively, taking part in both the 1970 and 1983 general science studies, to see whether the differences in achievement between schools have increased or diminished. (Figures 10 and 11).

Figure 9

Science subjects 1970 and 1983, Natural Sciences line.
Results for lowest achievers and best achievers for 18 common tasks.



In 1970, as well, Sweden was the country with the greatest consistency of school standards among both 10-year-olds and 14-year-olds. The yardstick, here as previously, is inter-school variance as a percentage of pupil variance. Inter-school differences diminished in 1983 in most countries. This diminution was particularly large in Finland and Japan. In England, on the other hand, the inter-school variation for 10-year-olds remain virtually unchanged in 1983, while in the USA and the Netherlands inter-school differences for 14-year-olds actually increased.

Achievement of the worst and best pupils

It is frequently alleged in the course of public debate that Swedish schools fail to do justice to talent. It is often said that talented children are at a disadvantage in our undifferentiated schools. Resources and instruction are not adapted to them, but to the weaker pupils in the same classroom.

No special analyses are yet available concerning the performance of the best pupils in each country in the 1983 tests. But analyses hitherto do not in any way suggest that the best Swedish pupils did less well than their counterparts in other countries. Figure 12 is a box-and-whisker plot for the 14-year-olds. The boxes show the score for the 50% achieving "average results". The vertical line indicates the median score, the cross (the arithmetical) average score. The "whisker" on the right illustrates the results obtained by the best 25 per cent of the pupils. As will be seen, the best 25% in Hungary and Japan have clearly better results than the best 25% in Sweden. Many countries obtain roughly the same results as Sweden with this rough-and-ready method of comparison, England, Italy and the USA among other countries, have definitely poorer results than Sweden.

Figure 10
Science subjects 1970 and 1983, 10-years olds.
Inter-school variance by percentages of pupil variance.

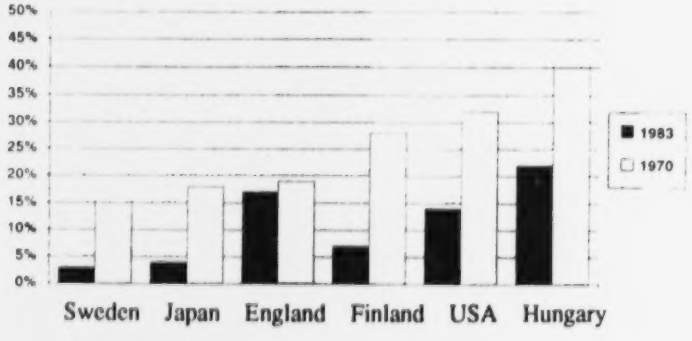


Figure 11
Science subjects 1970 and 1983, 14-years olds.
Inter-school variance by percentages of pupil variance.

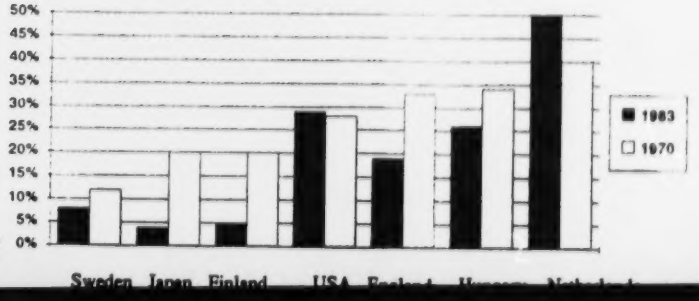


Figure 12
Science subjects 1983,
14-year olds.
"Box-and whisker-plot"

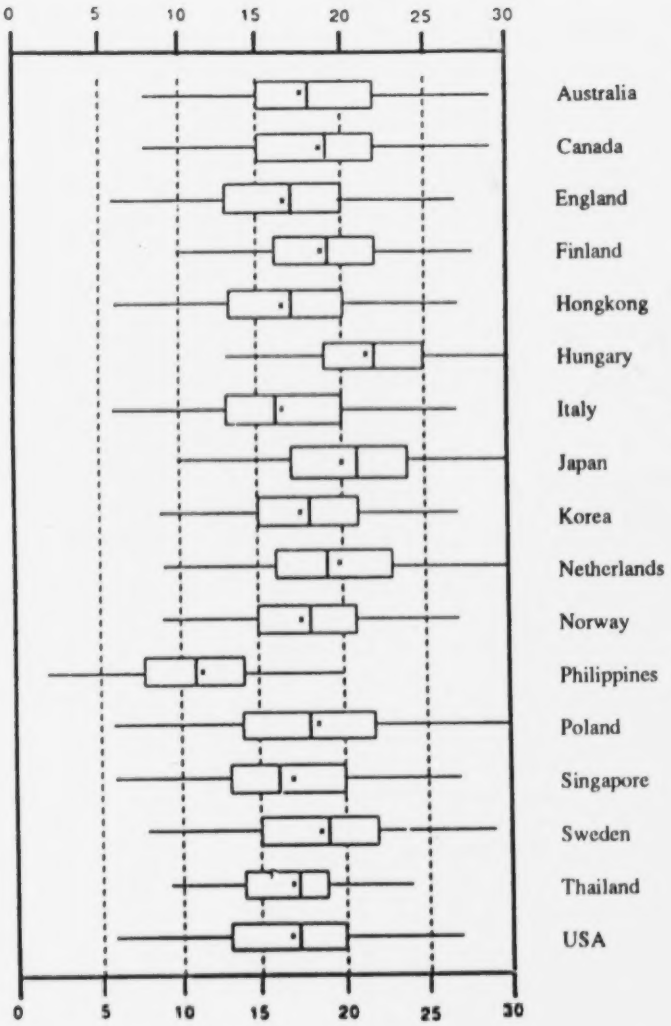
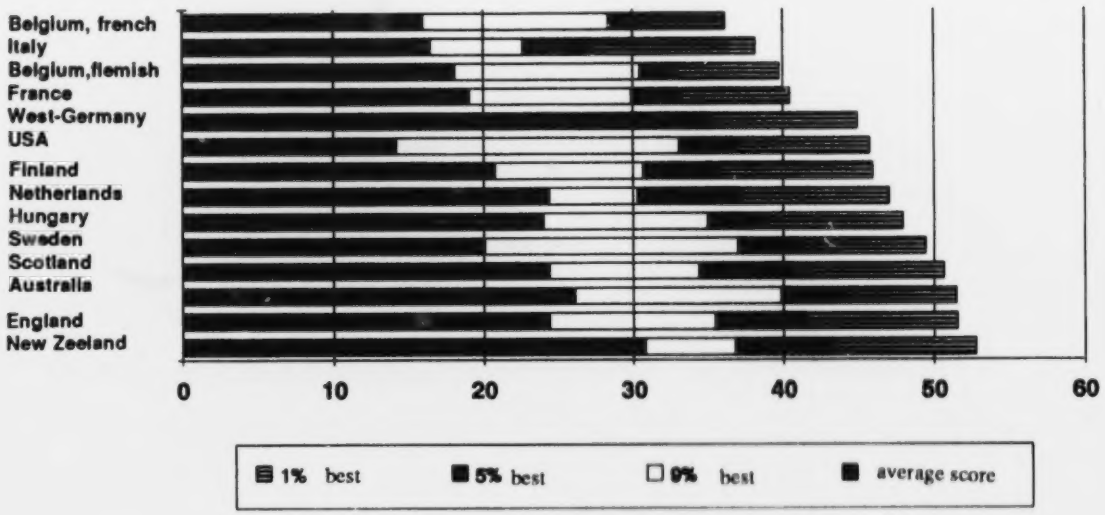


Figure 13 shows the standard of the élite - i.e. the best students in, for Sweden, the final grades of upper secondary and continuation school - in the 1970 science survey. The highest averages for the best percentage of pupils were obtained by New Zealand, England, Australia and Scotland, with Sweden coming fifth. In a comparison of total student groups, Sweden came ninth, while we came second in a comparison of the average scores for the best 9% and fourth in a comparison of scores obtained by the best 5%. One cannot help noticing that countries with a large proportion of each year attending school, i.e. with very broad-based recruitment, obtain larger average increases than countries with narrow-based recruitment, when the averages for the entire student group are compared with those of the best students.

Figure 13
Science subjects 1970, final grade of upper secondary and continuation schools.



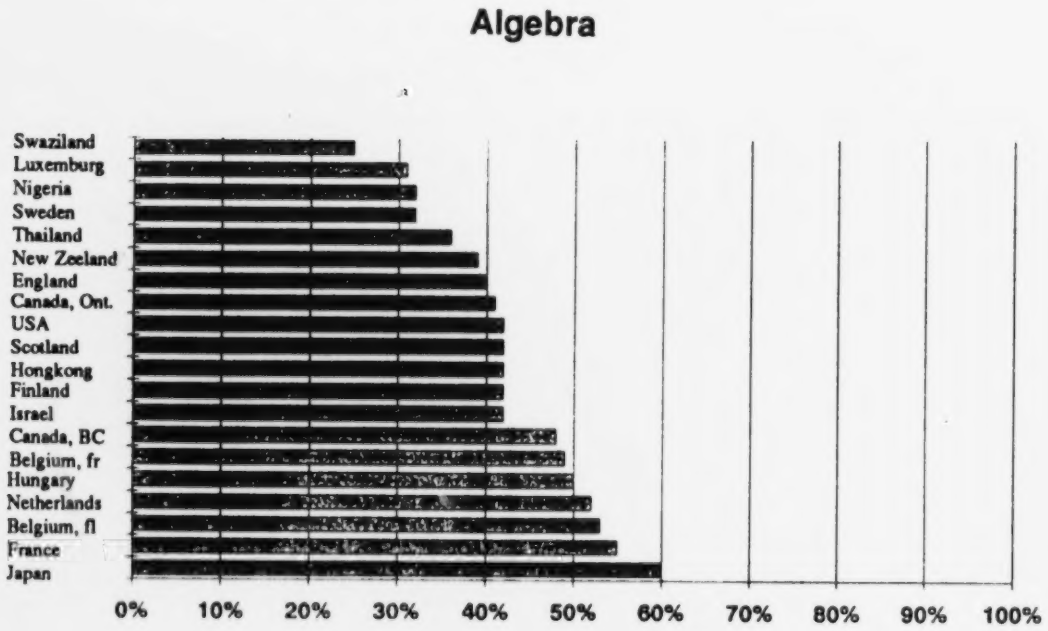
MATHEMATICS

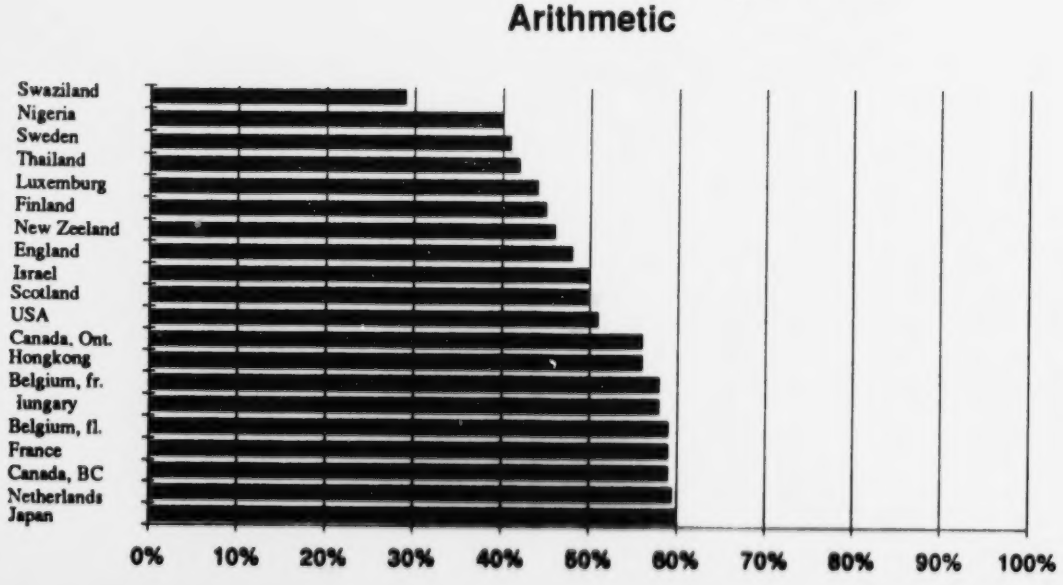
The test results

The mathematics studies in both 1964 and 1980 included two age groups, viz pupils attending (in Sweden's case) grade 7 of compulsory school and, once again in Swedish terms, students in grade 3 of the Natural Sciences and Technology lines and their counterparts in the 1964 school system.

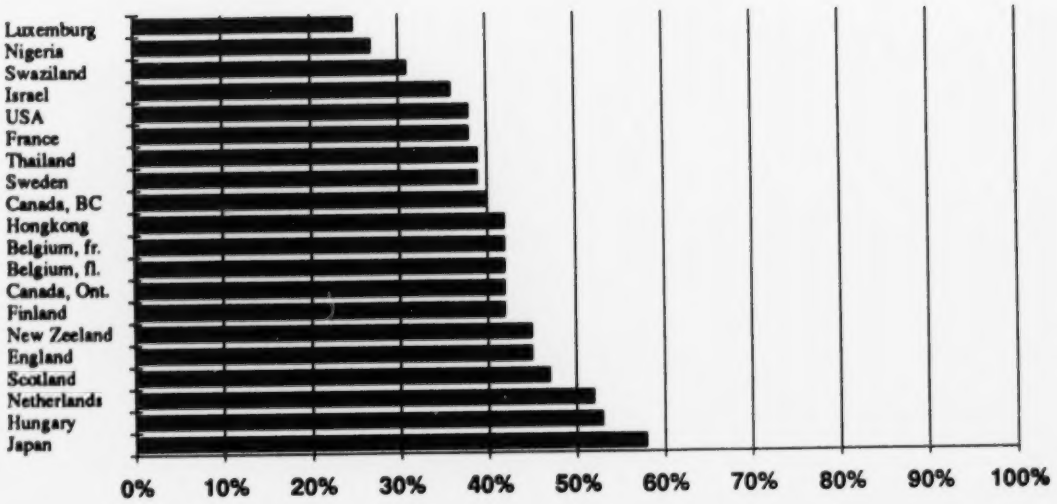
Mathematics tests for the grade 7 pupils can be divided into arithmetic, algebra, geometry, statistics, and probability, together with units of measurement. Figure 14 shows the solution rates in each field for the countries taking part. Sweden comes in the second half of the international ranking list on all sub-tests, but Swedish results are particularly weak in arithmetic and algebra. An analysis of the Swedish results reveals that pupils taking the general mathematics course do very badly, with results not far superior to sheer guesswork.

Figure 14
Mathematics 1980, grade 7. Percentage of right answers in the algebra, arithmetic, geometry, units of measurement, statistics and probability tests.

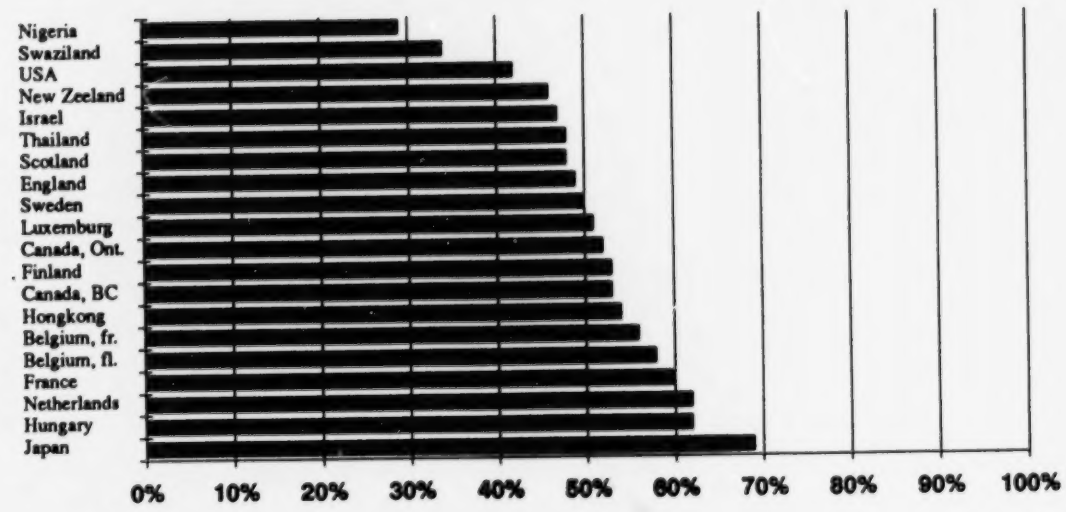


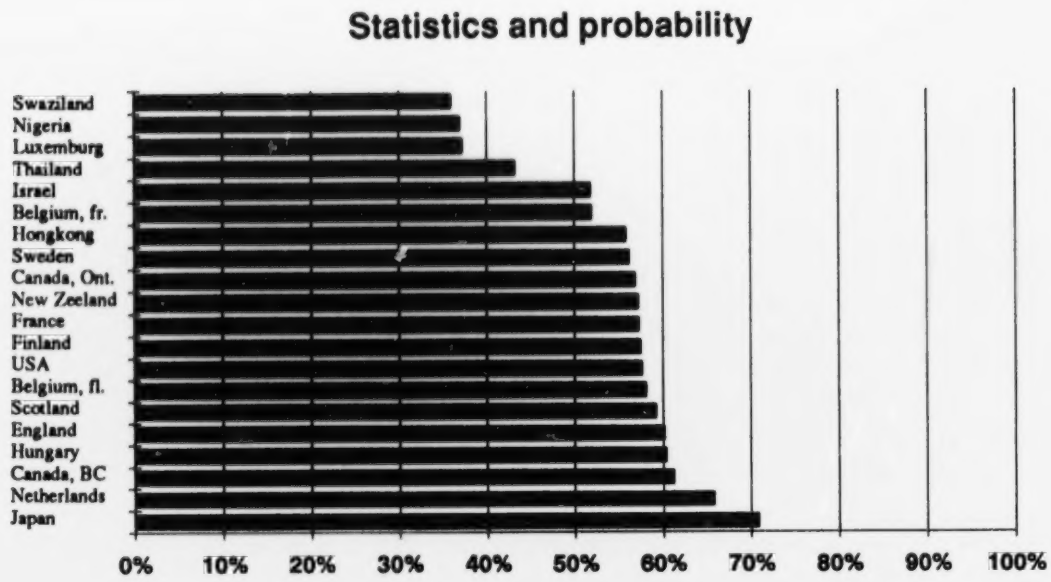


Geometry



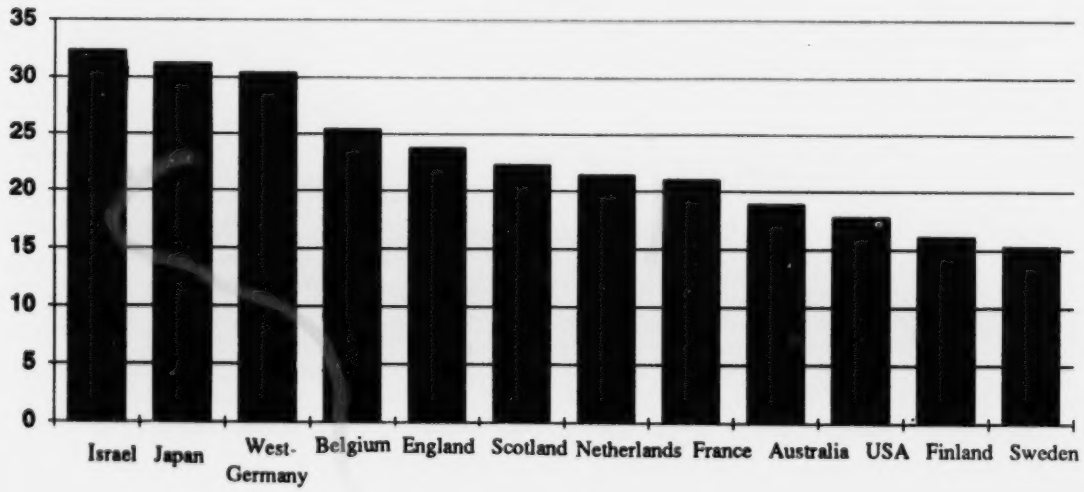
Units of measurement





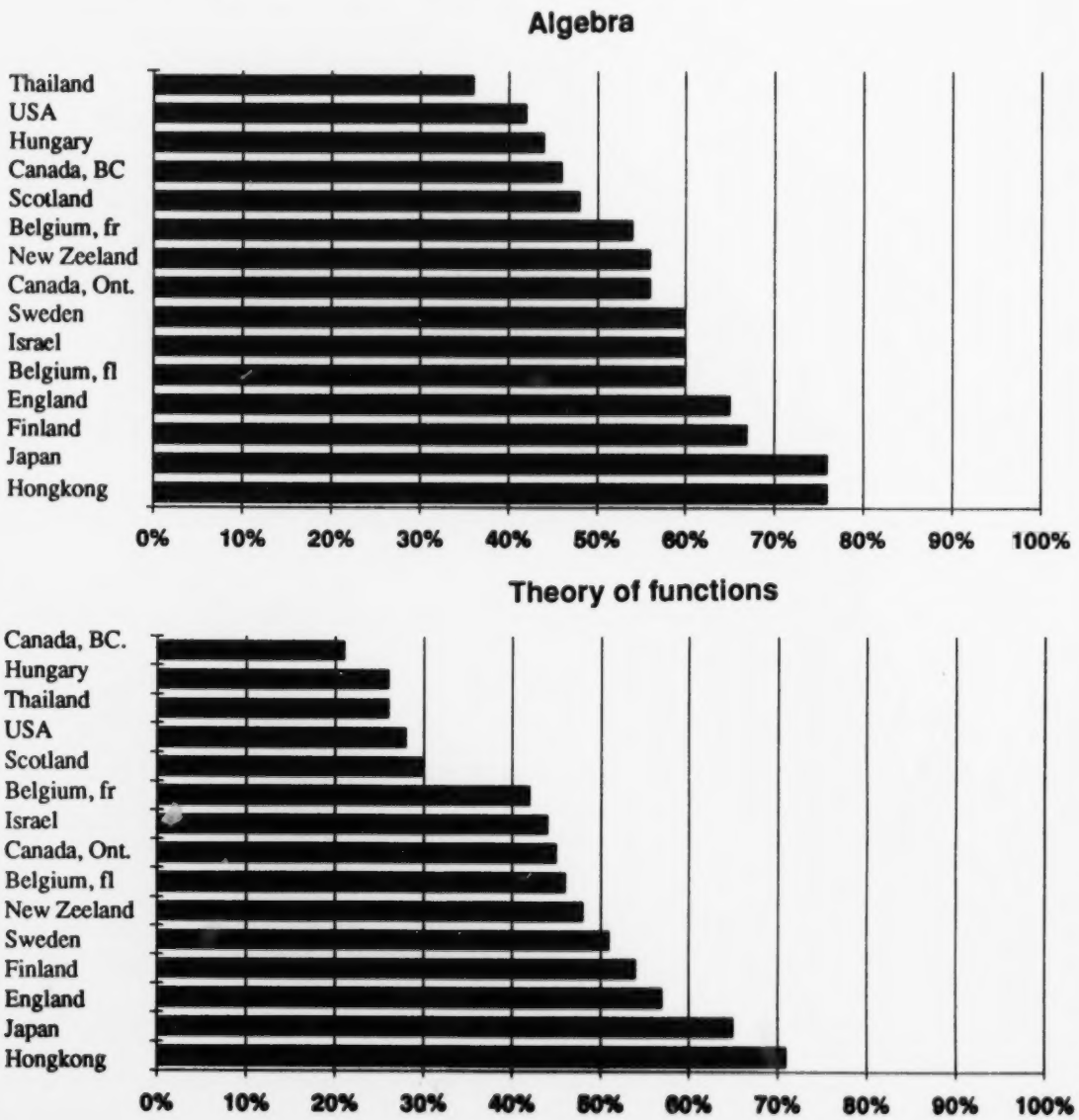
In the 1964 study as well, Swedish grade 7 pupils did badly in mathematics. As can be seen from figure 15, Swedish pupils have the worst result in any of the 12 countries taking part.

Figure 15.
Mathematics, 1964, grade 7. Average score



The students at upper secondary school level did far better by international standards. Figure 16 shows the results of the 1980 mathematics study for algebra and the theory of functions. Just as in comparisons of science at upper secondary school level, there are many differences between national school systems which have to be taken into account. Even more than at compulsory school level, where in practically all countries the entire age group is still attending school in the grade to which the comparison refers. In upper secondary study programmes specialising in mathematics, the proportion of students per annual cohort varies a great deal from one country to another. For example, 50% of the annual cohort were attending three-year upper secondary schooling in Hungary, and all of them were taking mathematics. In Sweden, 24% of the cohort were taking 3-year lines and half of them were taking the Natural Sciences and Technology lines.

Figure 16 Mathematics, 1980, grade 3 of upper secondary school, Natural Sciences and Technology lines. Percentage of right answers in the algebra and theory of functions tests.

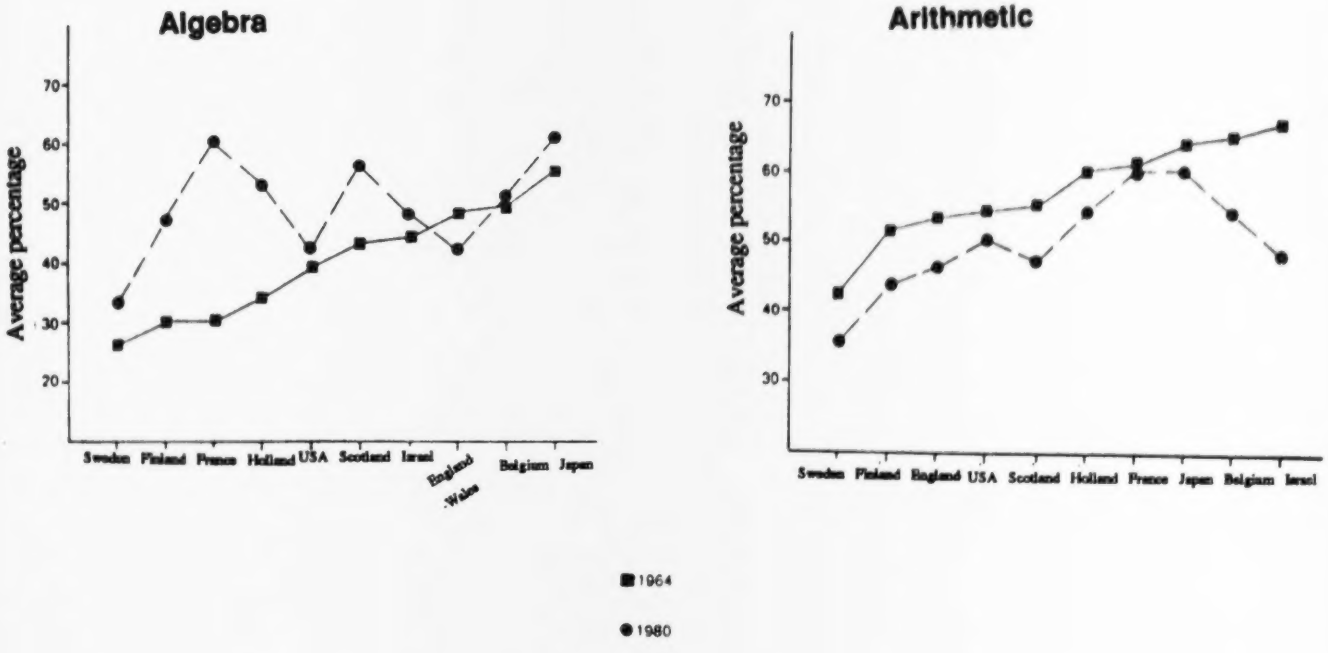


All in all, the Swedish IEA mathematics results point to serious shortcomings in grade 7, especially as regards the general course, but also into the advanced course. There are pupils who do very well - presumably they are to be found in the Natural Sciences and Technology lines, where mathematical knowledge develops and can very well stand up to international comparison. These results attracted a great deal of attention when they were first published and prompted a review of mathematics teaching and a number of measures aimed at improving it.

The development of mathematical knowledge, 1964-1980

The changes undergone by mathematics achievement between 1964 and 1980, as regards arithmetic and algebra in grade 7, point to contrary processes of development. In arithmetic, achievement has deteriorated in all countries taking part in both surveys. In algebra, achievement has improved in all countries, with a single exception. (Figure 17).

Figure 17
Mathematics, 1964 and 1980, grade 7.
Average percentage of right answers in arithmetic and algebra.

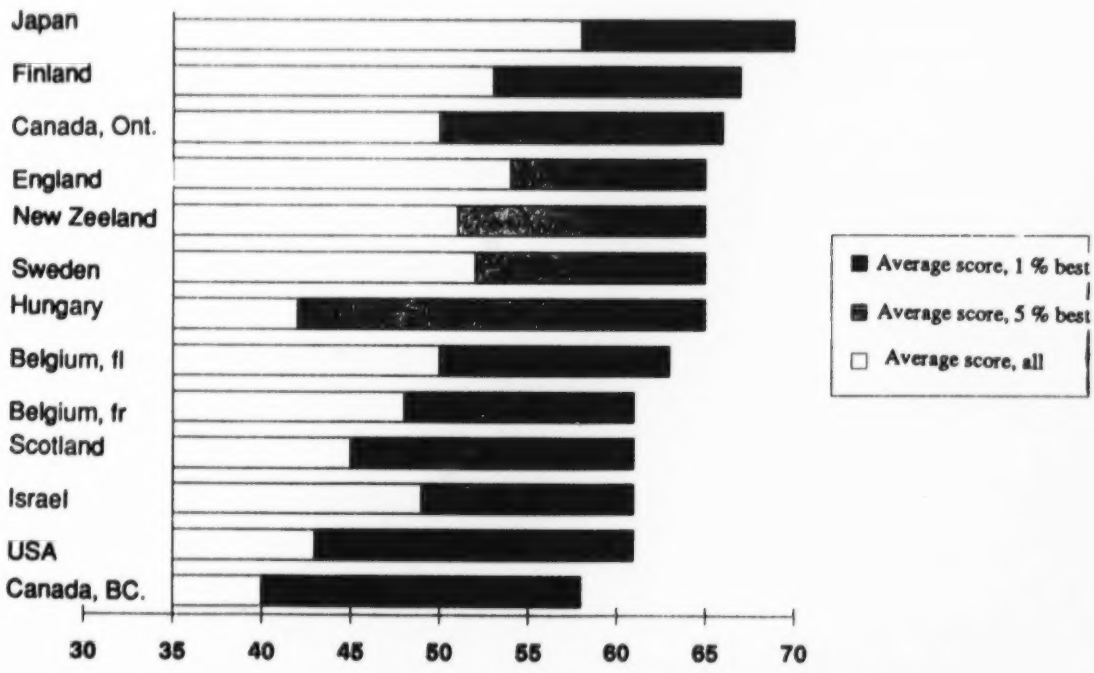


The causes of this notable decline in arithmetical knowledge have been a moot point. It has been conjectured, for example, that the use of pocket calculators has reduced the amount of arithmetical practice and led to an impairment of arithmetical skills. One thing is quite clear: in most of the countries concerned, educational systems were extensively changed between the two mathematics studies. These changes affected not only curricular and syllabi but structure and recruitment as well.

Comparisons between the best performers in different countries

Figure 18 shows the results for the one and five per cent best achievers respectively, in grades 3 of the Natural Sciences and Technology lines, plus their counterparts in various countries. The best Swedish students come off very well in the international comparison.Japan's results is far and away superior. The best five per cent of Japanese students actually have a higher percentage of right answers than the best one per cent in any other country. Finland's best students have a slightly better result than the Swedish students. Next come the Swedish students and the Canadians (Ontario). Hungary, where all students at this level read mathematics, had a relatively low average number of right answers. The best students, on the other hand, do very well, roughly the same as in Sweden, Canada and other countries.

Figure 18
Mathematics, 1980, grade 3 of upper secondary school, Natural Sciences and Technology lines.
Average score for all students, for the best five per cent and for the best one per cent.



No further results are available for comparisons between the best achievers in various countries for the 1980 mathematics study. As regards the 1964 study, we may note that the best Swedish pupils in grade 7 did exactly as badly, internationally speaking, as the entire survey population. Only one half per cent of the Swedish 13-year-olds scored over 45 out of 70. 23 per cent of the Japanese pupils and 16 per cent of the English pupils achieved the same score. Results more closely resembling Sweden's were returned by Australia (1.5 per cent), Finland (one per cent) and the USA (2.5 per cent).

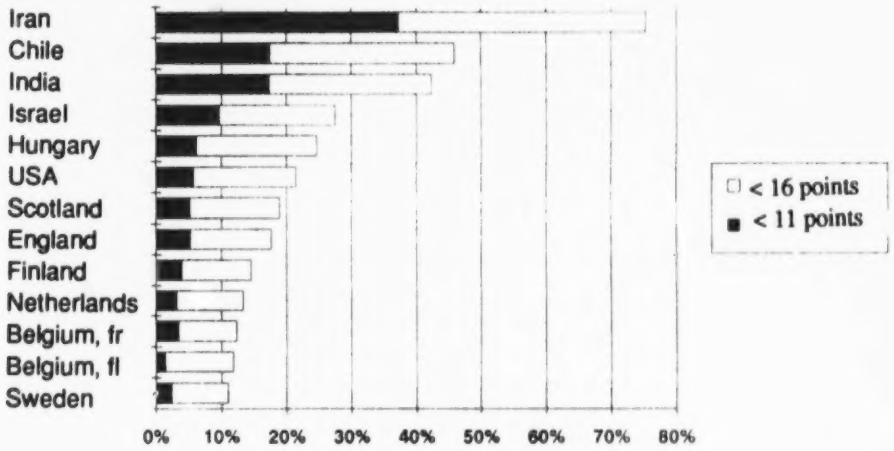
READING COMPREHENSION

As mentioned earlier, the IEA is currently planning a new Reading Literacy survey. Some of the questions in this study will be the same as in the previous survey of reading comprehension in 1970. A closer look should therefore be taken at the reading comprehension results, since eventually they will be compared with results from the new survey. As was shown in the overview on page 00, the Swedish pupils' reading comprehension was good by international standards, especially in the case of the 10-year-olds. The latter may seem surprising in view of Swedish pupils starting school one or two years later than children in most other countries. The 14-year-olds' reading ability was average by international standards and so the growth of reading comprehension between 10 and 14 was comparatively small. These results can be taken to reflect the importance attached in Sweden, both traditionally and currently, to reading instruction during the early years of school.

Variations in reading comprehension between pupils were roughly the same in Sweden as in other comparable countries. Inter-school variations in pupils' reading ability, on the other hand, were smaller than in all the other countries. The reading comprehension study, just like the studies of science subjects, points to a very consistent standard in Swedish schools.

In the case of reading comprehension, an indication of the proportion of pupils respectively attaining and falling short of a certain minimum level is perhaps more interesting than calculations of averages. There is a certain minimum level below which reading does not function at all. Figure 19 shows the percentages of ten-year-olds scoring less than 11 and 16 points, two limits taken here to correspond to this minimum level. First and foremost, the figure points to the great difference between industrialised and developing countries. In Sweden, 2% of 10-year-olds fall short of 11 points, and in Hungary and the USA about 6% do so. The unsatisfactory reading and writing ability of an excessive number of compulsory school pupils has been a frequent topic of discussion in recent years. It will be interesting in a few years' time to see new Swedish results for reading comprehension, by comparison with other countries. The 1970 study showed that compulsory school pupils were then coping well by international standards.

Figure 19
Reading comprehension, 1970, 10-years-olds.
Percentage of pupils scoring less than 11 and 16 respectively.

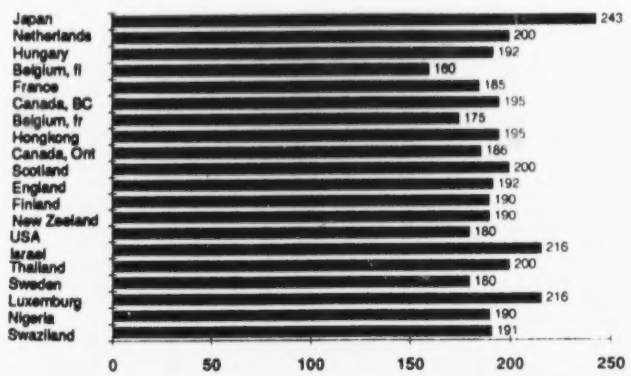


COMPARISONS OF TIME AND RESOURCE INPUTS

In addition to test results, the IEA studies also involve collecting other information about school systems, teaching, teacher resources, pupil attitudes etc. This information is interesting in its own right for purposes of international comparison and it also helps us to interpret inter-country differences in the achievement test results. The number of school days per year varies from one country to another, in common for example with the number of teaching hours devoted to different subjects, the occurrence of homework and teacher resource inputs per pupil or class.

Figure 20 shows the number of school days per year. These figures come from the 1980 mathematics study and refer to grade 7 and its counterparts in other countries.

Figure 20
Mathematics, 1980, grade 7.
Number of school-days per year



In the figure, countries are placed in ranking order with reference to their average scores in the test. Japan, with the highest average score also has by far the largest number of school days. Otherwise

the figure does not reveal any co-variation between mathematics results and number of school days, even though Sweden is one of the countries with the smallest number of school days per year, and returning a poor result for the mathematics test. Figure 21 shows the number of mathematics periods per year according to the grade 7 time schedule. Here again, countries are placed in ranking order with reference to test results. The number of mathematics periods varies but does not co-vary with the test scores. Sweden has a relatively small number of mathematics periods compared with most of the other countries.

Figure 21

Mathematics, 1980, grade 7. Number of mathematics periods per year.

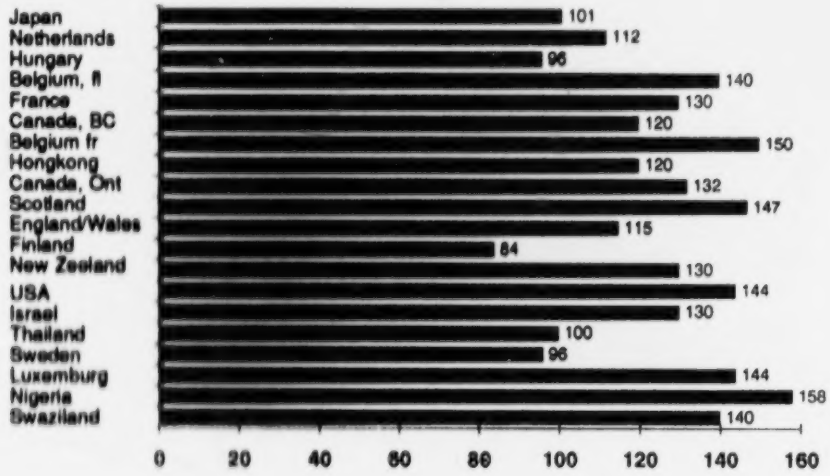


Figure 22 shows the sizes of mathematics classes in grade 7. Here again, there is no correlation with test results. Japan, with the best test result, has one of the largest class sizes - twice as large as in Sweden. In upper secondary school, in specialised science programmes, classes are smaller than in grade 7 in nearly all countries, and in several countries a good deal smaller. In upper secondary school, too, there appears to be no direct co-variation between average class size and average test result. (Figure 23). Average class size in grade 7 in Sweden was, by international standards, one of the very smallest, while class size in grade 3 of upper secondary school (Natural Sciences and Technology lines) was, internationally speaking "average".

Figure 22
Mathematics, 1980, grade 7. Average class size.

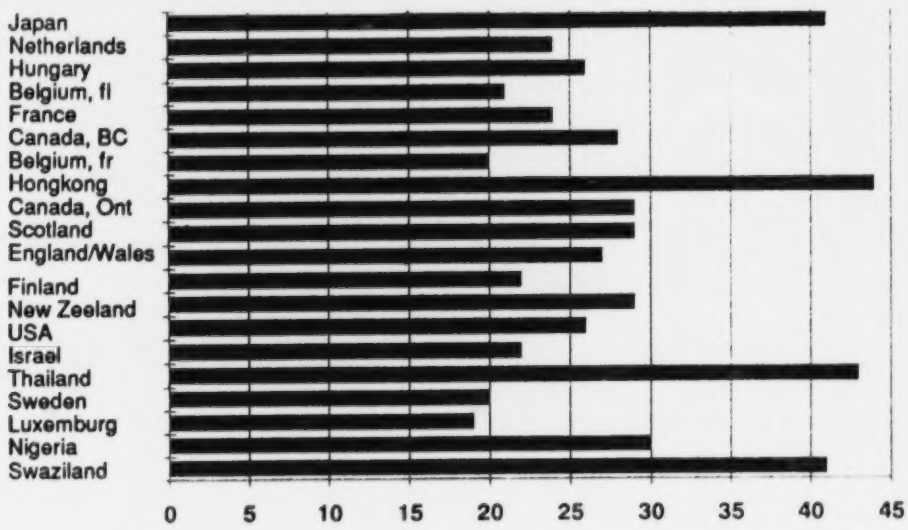
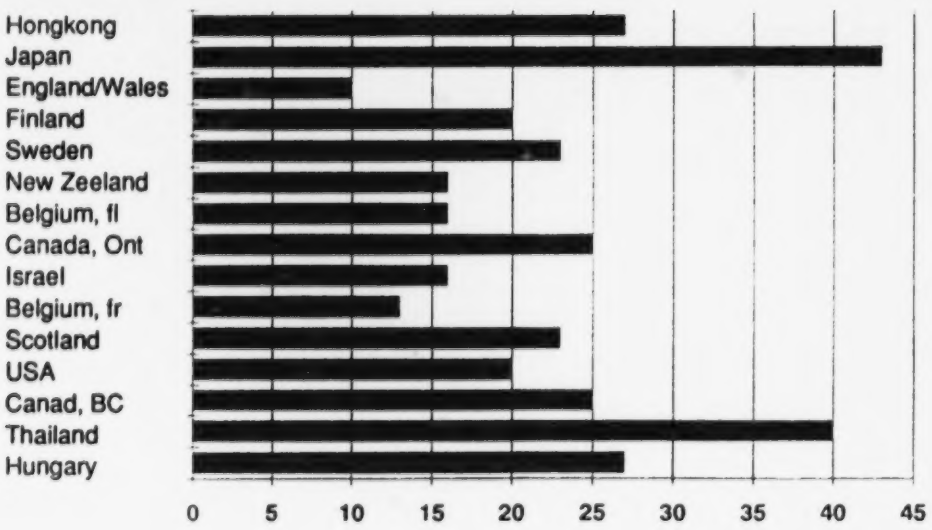
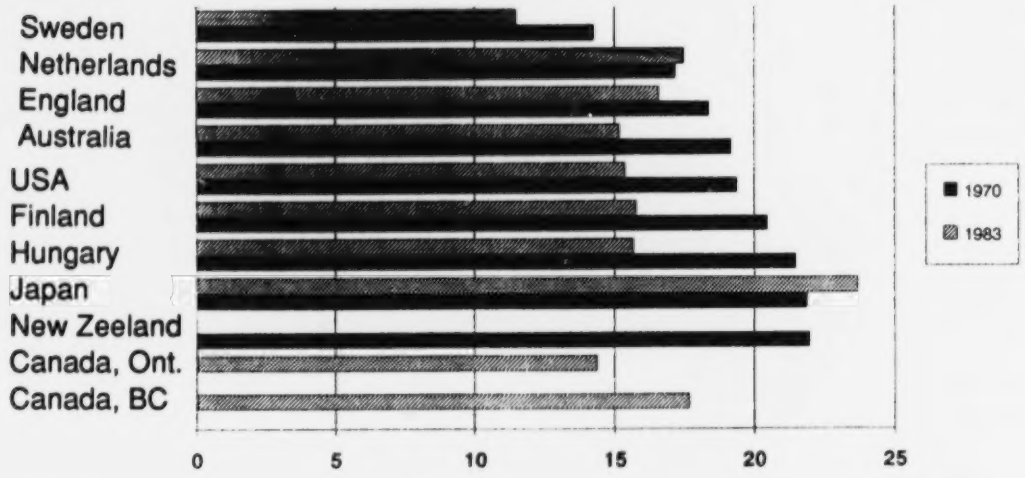


Figure 23
Mathematics, 1980, grade 3 of upper secondary school,
Natural Sciences and Technology lines.
Average class size.



Class size is an indication of teaching situation and resource availability in schools, but, even with equally sized classes, teaching can be organised in a variety of ways. In one class, for example, there may be several teachers involved simultaneously in teaching the entire class or taking pupils or groups of pupils from that class. The number of pupils per teacher was investigated in both the 1970 and 1983 studies of science teaching. Figure 24 shows these data for 14-year-olds. In most countries, teacher density is greater in the second survey than in the first. Sweden had the smallest number of pupils per teacher both in 1970 and in 1983, while Japan had the largest number. In 1983, as can be seen, there were twice as many pupils per teacher in Japan as in Sweden.

Figure 24



HOMEWORK IN VARIOUS COUNTRIES

In the course of public debate it is argued from time to time that Swedish schools no longer make any demands on their pupils. This permissive attitude is sometimes instanced by allegations that little homework is given and that Swedish pupils devote a minimum of time at home to their schoolwork. The answers to one of the questions in the pupil-questionnaire administered conjointly with the 1980 IEA mathematics study does in fact confirm that Swedish pupils in grade 7 devote appreciably less time to homework than their counterparts in other countries. Figure 25 shows the average amount of time devoted to homework, both totally speaking and in mathematics.

Figure 25

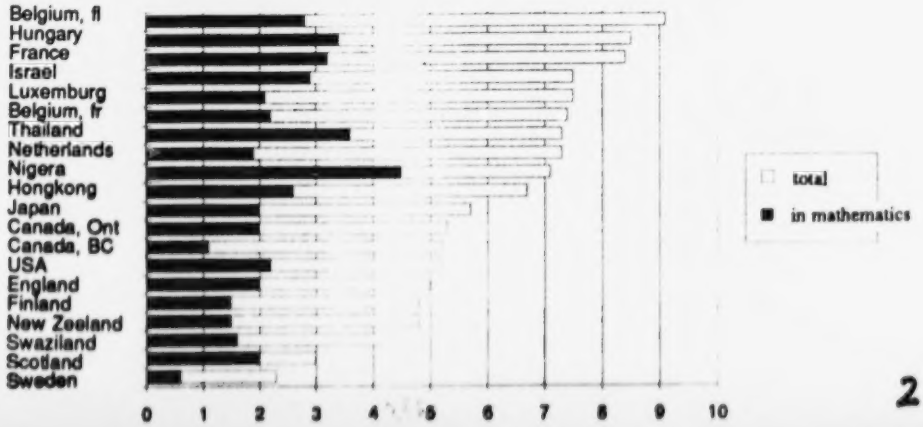


Table 26
The 1985 WHO survey. Average (median) number of hours homework per day for 13-and15-year olds.

Nation	13-year olds		15-year olds	
	Boys	Girls	Boys	Girls
Finland	0.4	0.6	0.4	0.5
Wales	0.6	0.7	0.8	1.1
Sweden	0.6	0.7	0.6	0.8
Switzerland	0.7	0.7	0.5	0.6
Norway	0.7	0.7	0.5	0.8
Austria	0.9	1.0	0.6	1.0
Spain	0.9	1.3	-	-
Hungary	1.2	1.6	1.2	2.0

Swedish pupils devote by far the smallest amount of time to homework, both totally speaking and for mathematics. In most countries, the pupils stated that homework occupied them for at least one hour a day; in Sweden they reported barely half an hour.

A subsequent international study, the 1985 WHO questionnaire on school children's health and well-being presents somewhat different results concerning homework time input. These differences, presumably, are connected with the difficulties involved in collecting this kind of information by questionnaire and also with differences in the wording of the questions, as well as to random differences caused by the two surveys being based on samples and, finally, actual changes in homework time inputs between 1980 and 1985. Table 26 shows average homework time per day for 13-year-old and 15-year-old boys and girls according to the WHO survey. The Swedish figures here do not differ from those of most other countries. Just over half an hour a day is the amount of time devoted to school work at home in the majority of countries. Girls, on the whole, devote more time to homework than boys in every country. Homework time does not increase in superior grades - it is equally prone to diminish.

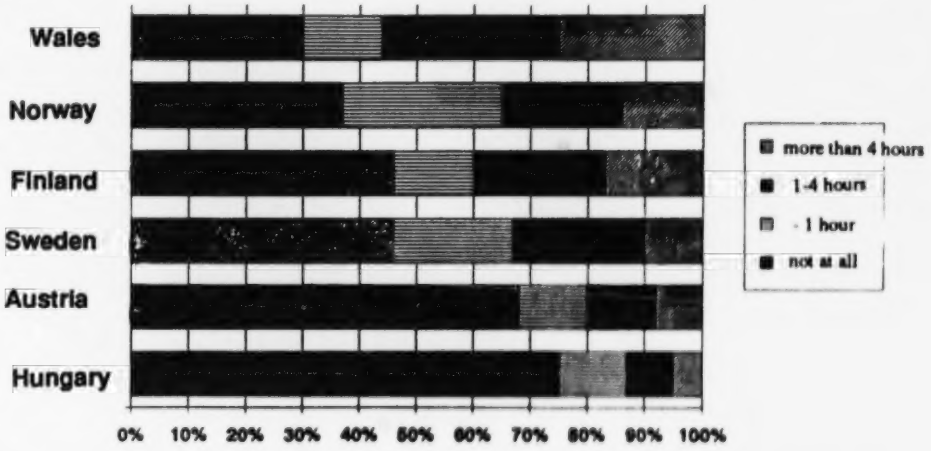
Comparisons with the IEA study six years earlier, as we have already remarked, are a very hazardous undertaking. But in a few countries taking part in both surveys - Sweden excepted - homework time seems to have diminished.

VIDEO WATCHING

TV and video consumption among children and young adults and the question of how it affects them, favourably or otherwise, has been a research topic in several quarters. The amount of time children spend viewing and what they look at naturally has a crucial bearing on the positive or negative connotations of viewing. In the WHO questionnaire, it was asked how long youngsters generally spend watching TV and video. At present only the replies concerning video viewing are available. Figure 27 shows the extent to which 13-year-olds watch video in the participating countries.

Barely half the Swedish 13-year-olds were not in the habit of watching video at all at the time of the questionnaire in 1985. The percentage of non-viewers was equally large in Finland, while habitual video viewers there spent slightly more time in front of the video than was the case in Sweden. Of the countries investigated Wales had the largest percentage of video viewers and "heavy consumers".

Figure 27



This figure does not show the differences between girls and boys or between age groups. More exhaustive tables indicate that boys are much bigger video consumers than girls in all countries. The percentage looking at video at all was larger among boys than among girls, and on average the boys devoted more time to video viewing. Viewing also increased with advancing age; 11-year-olds spent less time watching video and 15-year-olds spent slightly more time, compared with 13-year-olds.

SATISFACTION WITH LIFE AND SCHOOL

The media often convey a very gloomy picture of Swedish schools and the lives of the young people attending them . The commonest school features and articles focus on unrest, violence, disruptive behaviour and tedium in schools. People relying entirely on news media for information about schools can very easily gain an impression of unrelieved gloom.

This image of Swedish pupils' negative attitudes to school is to a great extent based on results from IEA studies at the beginning of the 1970s. In the 1970 science teaching study, satisfaction with school was measured on the basis of pupil's replies to twelve statements about school and education. The answers were summarised in the analysis to give an indication of satisfaction with school. Figure 28 shows school satisfaction among 10-year-olds and 14-year-olds in different countries. As can be seen, the Swedish pupils were a good deal less contented than pupils in all the other countries taking part.

Figure 28
Science subjects 1970, 10-and 14-year olds.
School satisfaction.

The 1985 WHO survey also included questions about satisfaction with life generally and with school in particular. Figures 29 and 30 show the breakdown of replies from 13-year-olds in the different countries. These figures show that Swedish youngsters themselves at all events at the time of this survey, were relatively contented, even by international standards.

Figure 28, con.

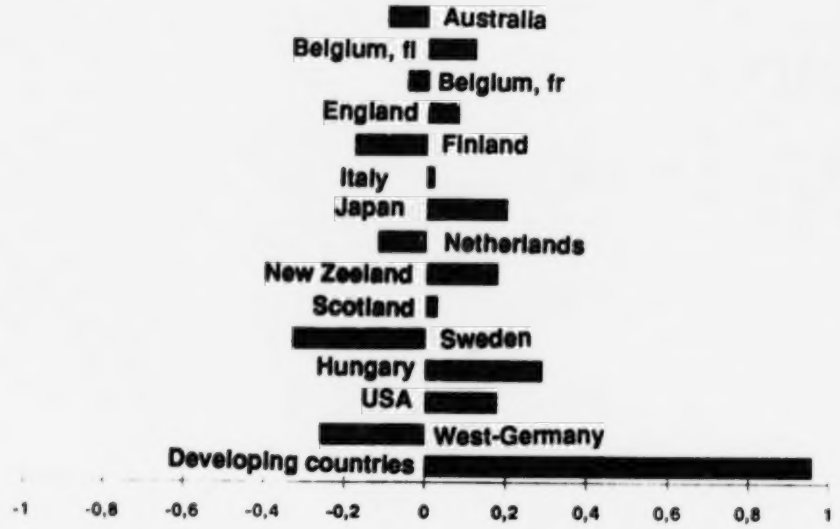
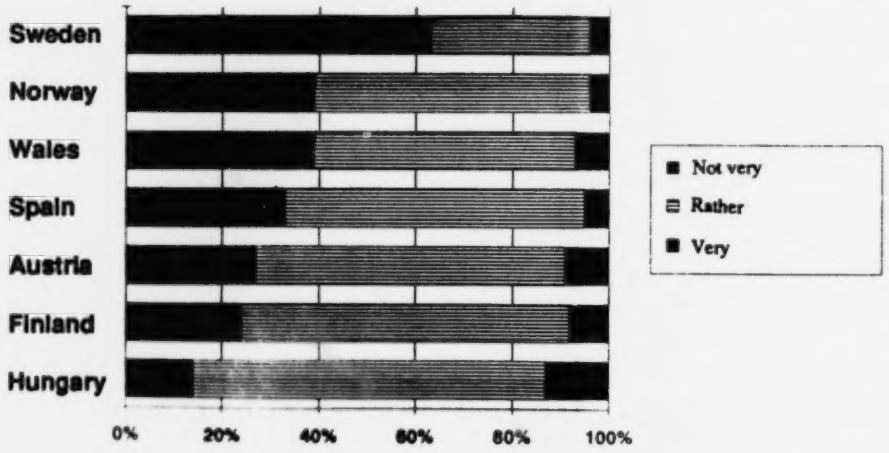


Figure 29
The 1985 WHO survey. Replies to the question " How contented are you with life at present?" 13-year olds.



There is of course a great deal of difficulty involved in preparing replies to attitude questions of this kind in different countries. Although the questions were translated as accurately as possible, shades of meaning can make a difference and usage can vary; for example, people in certain countries may be more disposed than people in other countries to opt for extreme alternatives.

However, the replies to the questions concerning satisfaction with life and school do not indicate that Swedish pupils are all that discontented internationally speaking. On the contrary, Swedish-13-year-olds appear more content with life and school than 13.year-olds in most other countries.

More detailed tables than those presented show that girls in all countries enjoy school more than boys do. And as a rule the younger pupils are more contented than the older ones. The younger pupils too are even more contented with life than the older ones. On the other hand, unlike school, girls are not invariably more contented with their lives than boys are. In Sweden the opposite applies. In all three age groups, boys are somewhat more contented with life than girls are. Table 31 shows replies to a few more questions in the WHO questionnaire, questions relating to aspects of satisfaction. These questions concern solitude, close friendship and leisure occupation. As remarked earlier, nuances and usage in different languages can affect a pattern of replies. Comparisons, therefore, can only be essayed with caution.

However, as can be seen from the table, there are strikingly small differences in the replies given by young persons in different countries. The great majority of 13-year-olds in all countries would know what to do with themselves if they had an afternoon off school. A quarter of the Swedish 13-year-olds had a very close friend which is roughly the same proportion as in Finland, Norway, Spain and Wales, but less than in Austria and Hungary. Roughly one out of every ten 13-year-olds felt lonely quite often or very often. Young persons in all the countries investigated felt lonely to exactly the same extent, and their replies break down more or less identically.

This study, then, does not point to any widespread dissatisfaction or loneliness on the part of Swedish pupils. Other research projects, e.g. the IEA Writing study, indicate the same state of affairs. In this connection, however, there are not yet any international findings available which can lend perspective to the replies made by Swedish youngsters.

Figure 30
The 1985 WHO survey. Replies to the question " What do you think of school at present?" 13-year olds.

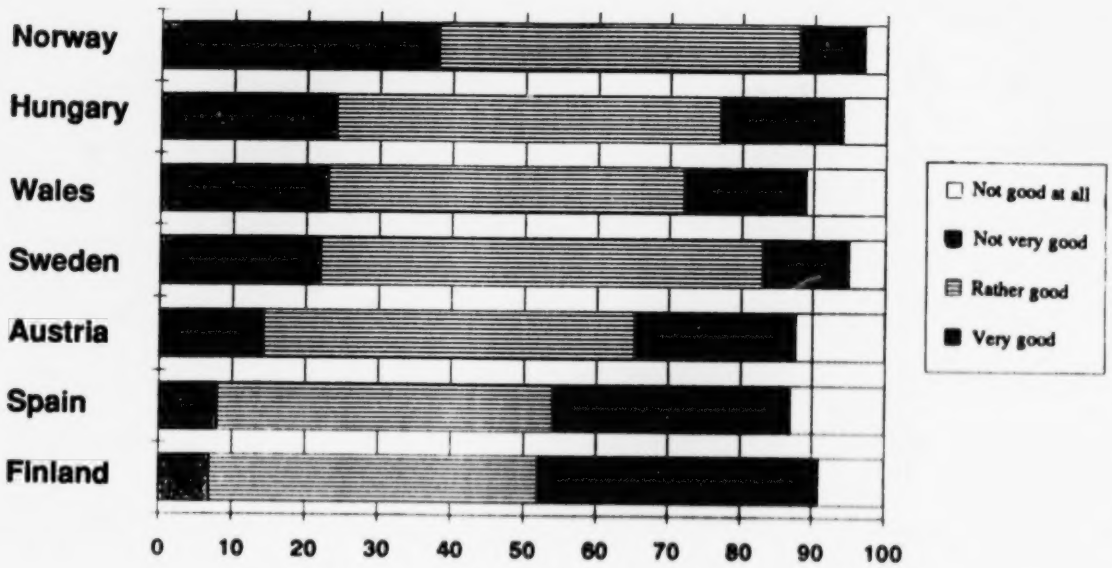


Table 31

The 1985 WHO survey. 13-year olds.
Replies to the question " *If you were given an afternoon off school, would you know what to do with the time?"*

Country:	Percentage of answers: Yes, I have always something to do	Yes, I would find something to do	No, I wouldn´t know what to do
Finland	48	47	5
Norway	35	59	6
Spain	57	39	4
Sweden	39	53	8
Hungary	60	37	3
Wales	31	58	11
Austria	40	53	7

Question: *"Do you ever feel lonely?"*

Country:	Percentage of answers: Yes, very often	Yes, rather often	Sometimes	No
Finland	3	6	55	36
Norway	2	3	52	43
Spain	4	3	49	44
Sweden	3	6	53	38
Hungary	5	5	51	39
Wales	4	8	54	34
Austria	4	6	52	38

Question: *" Do you have a very close friend at present?"*

Country :	Percentage of answers: Yes	No
Finland	78	22
Norway	71	29
Spain	78	22
Sweden	75	25
Hungary	88	12
Wales	80	20
Austria	94	6

EDUCATIONAL SPENDING

Data concerning educational spending, among other things, are regularly connected by UNESCO and OECD from their member countries. Needless to say, only rough comparisons are possible, owing to differences between educational systems in educational funding and between reporting and statistical systems etc. Table 32 shows public educational spending by percentages of GNP and in per capita terms for various countries. In addition, many countries have varying amounts of private educational spending. In Sweden this is only a small item of expenditure.

Table 32

UNESCO Statistical Digest 1987. Public educational spending 1984 (1985).

Country:	Year	Percentage of the GNP	Cost per capita in Swedish crowns
Sweden	1985	7.5	7 800
Netherlands	1984	6.9	5 800
USA	1984	6.8	5 900
Norway	1985	6.7	7 100
Denmark	1984	6.6	6 500
Australia	1984	6.5	3 400
Japan	1984	5.6	5 800
Finland	1984	5.5	4 800
Great Britain	1984	5.2	3 100
West-Germany	1984	4.6	4 600

The OECD also collects information about private education funding. In Japan and France, for example, this expenditure was substantial amounting to more than one per cent of GNP.

There are no international accounts of educational spending by type of school, by purpose per pupil, etc. There are of course great difficulties involved in obtaining information of this kind. However, development work in this field is in progress within the OECD, aimed at evolving indicators of educational spending commitments in various countries.

GEOGRAPHICAL KNOWLEDGE

During 1988 the National Geographic Society conducted an international survey of the geographical knowledge possessed by adults in nine countries, Sweden among them. Random samples of the adult population were asked a number of questions requiring them, among other things, to locate a number of countries, the Pacific Ocean, the Persian Gulf etc. on an outline map.

As can be seen from figures 33 and 34, the Swedes had the highest score in this test. This applies to the population as a whole and also to comparisons of the youngest age group, recent school leavers - in each country.

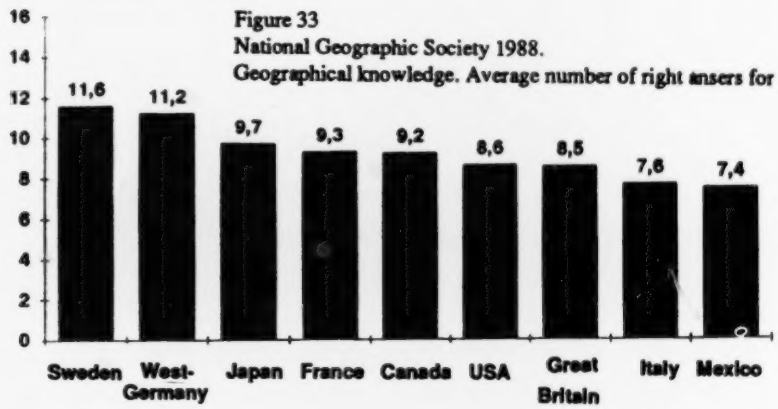


Figure 33
National Geographic Society 1988.
Geographical knowledge. Average number of right ansers for all adults (aged 18 and over).

Swedish adults (aged over 18) scored, on average, 11.6 out of 16. Younger adults (aged 18 - 24) had a somewhat better score, 11.9, while the very oldest participants, those aged over 55, scored 10.3.

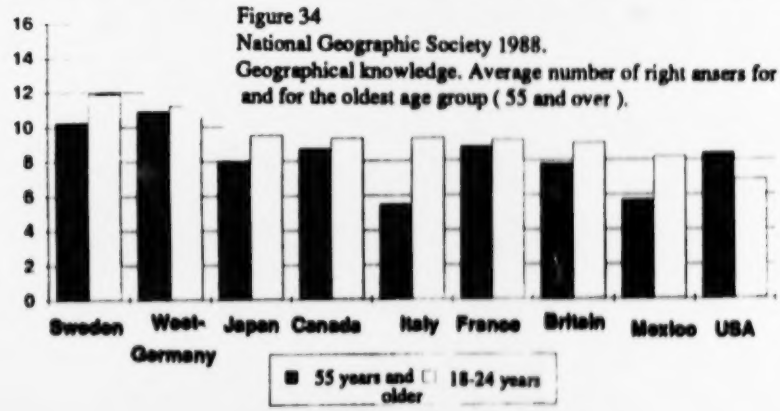


Figure 34
National Geographic Society 1988.
Geographical knowledge. Average number of right ansers for the youngest age group (18-25) and for the oldest age group (55 and over).

In all countries except the USA, young persons did better or much better in the test than the top age group, the over 55s. Youngsters in the USA had a conspicuously low score, appreciably lower than in all the other countries.

SWEDISH EDUCATION SCRUTINISED BY THE ECONOMIST

In the autumn of 1988 the British journal the Economist published a review of the Swedish education system in which the conclusion was reached that longer and better education for all had failed to eliminate social inequalities. This disappointment, the article continued, had been alleviated by the advantages of having a workforce so well educated as to be a source of envy to the rest of Europe.

The article drew attention to successful efforts to create an equivalent school all over the country, even in rural areas for example. It was observed that Swedish youngsters tended more often than their counterparts in most other countries, to go on to some kind of post-compulsory education and that the standard of achievement in Swedish schools could very well stand up to international comparison. This latter point was in fact instanced by means of the geography survey already mentioned. More Swedish than American youngsters were able, for example, to give the correct population of the USA.

The Economist was impressed by knowledge of languages and the emphasis put on modern languages in Swedish schools. A study of compulsory school curricula in a number of Western countries revealed that Sweden was devoting far more time to foreign languages than the Netherlands, Germany, Spain and Great Britain - presumably because Swedish is not spoken by all that many people outside Sweden itself. Reference was also made to the volume of corporate and adult education. It was asked whether the Swedes were perhaps in the process of becoming "over-educated" but this question was immediately replied to in the negative. The low unemployment figures for all age groups, the article continued, refuted this, as did the development of Sweden's economy.

The Economist observed that Swedish schools were expensive. It opined that Sweden, by devoting a higher percentage of GNP (table 32) to education than any other country, was making a sound investment. Technical progress would call for a well-educated work force.

LIST OF FIGURES AND TABLES

Figure 1. Science subjects 1983, 10-year olds. Average score and standard deviation.

Figure 2. Science subjects 1983, 10-year-olds. Variation in pupils' results between schools (Inter-school variance by percentages of pupil variance).

Figure 3. Science subjects 1983, 10-year-olds. Percentages of schools in different countries with lower average scores than the least-achieving school in Japan (below 12.6 points).

Figure 4. Science subjects 1983, 14-year-olds. Average score and standard deviation.

Figure 5. Science subjects 1983, 14-year-olds. Variation in pupils'results between schools (Inter-school variance by percentages of pupil variance).

Figure 6. Science subjects 1983, final grade of upper secondary school, science specialities (Natural Sciences and Technology lines in Sweden). Average score and standard deviation.

Figure 7. Science subjects 1970 and 1983, grades 7, 8 and 9 Results for 18 common test questions by percentage of right answers in each year.

Figure 8. Science subjects 1970 and 1983, Natural Sciences line. Breakdown of results on 18 common tasks.

Figure 9. Science subjects 1970 and 1983 Natural Sciences line. Result of the lowest achievers and best achievers for 18 common tasks.

Figure 10. Science subjects 1970 and 1983, 10-year-olds. Inter-school variance by percentages of pupil variance.

Figure 11. Science subjects 1970 and 1983, 14-year-olds. Inter-school variance by percentages of pupil variance.

Figure 12. Science subjects 1983, 14-year-olds. "Box-and-whisker-plot" showing average scores and variation of results.

Figure 13. Science subjects 1970, final grade of upper secondary and continuation schools. Average score for all students and for the best nine, five and one per cent in each country.

Figure 14. Mathematics 1980, grade 7. Percentage of right answers in the algebra, arithmetic, geometry, units of measurement, statistics and probability tests.

Figure 15. Mathematics, 1964, grade 7. Average score.

Figure 16. Mathematics, 1980, grade 3 of upper secondary school, Natural Sciences and Technology lines. Percentage of right answers in the algebra and theory of functions tests.

Figure 17. Mathematics, 1964 and 1980, grade 7. Average percentage of right answers in arithmetic and algebra.

Figure 18. Mathematics, 1980, grade 3 of upper secondary school, Natural Sciences and Technology lines. Average score for all students, for the best five per cent and for the best one per cent.

Figure 19. Reading comprehension, 1970, 10-year-olds. Percentage of pupils scoring less than 11 and 16 respectively.

Figure 20. Mathematics 1980, grade 7. Number of school days per year.

Figure 21. Mathematics 1980, grade 7. Number of mathematics periods per year.

Figure 22. Mathematics 1980, grade 7. Average class size.

Figure 23. Mathematics 1980, grade 3 of upper secondary school, Natural Sciences and Technology lines. Average class size.

Figure 24. Science subjects 1970 and 1983, 14-year-olds. Number of pupils per teacher.

Figure 25. Mathematics 1980, grade 7. Average number of hours' homework per week, totally and for mathematics.

Table 26. The 1985 WHO survey. Average (median) number of hours' homework per day for 13- and 15-year olds.

Figure 27. The 1985 WHO survey. Video viewing per week 13-year olds.

Figure 28. Science subjects 1970, 10-and 14-year olds. School satisfaction.

Figure 29. The 1985 WHO survey. Replies to the question "How contented are you with life at present?" 13-year-olds.

Figure 30. The 1985 WHO survey. Replies to the question, "What do you think of school at present?" 13-year-olds.

Table 31. The 1985 WHO survey. 13-year-olds. Replies to the

questions:
Do you ever feel lonely?
If you were given an afternoon off school, would you know what to do with the time?
Do you have a very close friend at present?

Table 32. UNESCO Statistical Digest 1987. Public educational spending 1984 (1985).

Figure 33. National Geographic Society 1988. Geographical knowledge. Average number of right answers for all adults (aged 18 and over).

Figure 34. National Geographic Society 1988. Geographical knowledge. Average number of right answers for the youngest age group (18 - 24) and for the oldest age group (55 and over).

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